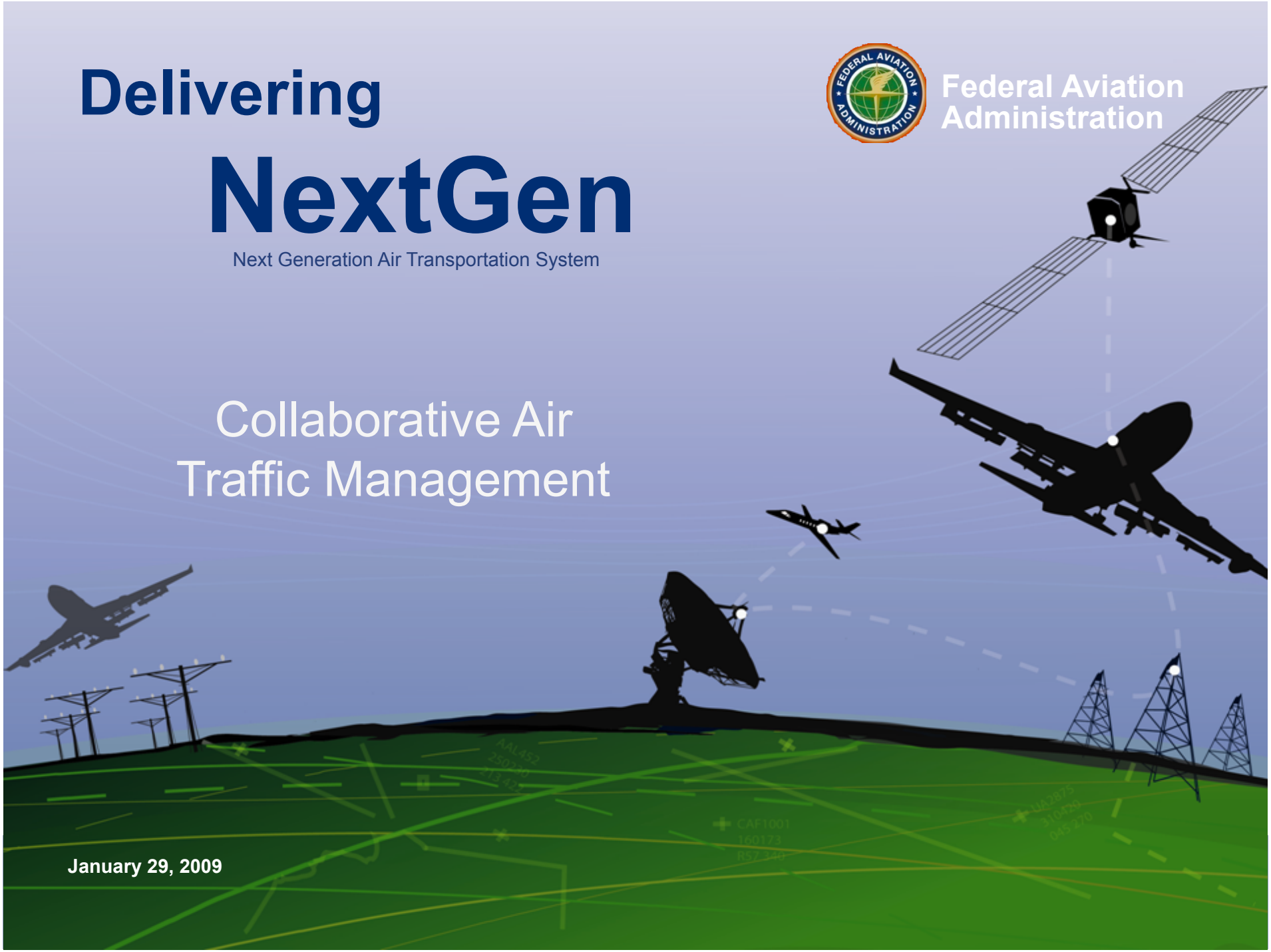
Delivering NextGen

Next Generation Air Transportation System

Federal Aviation Administration

Collaborative Air Traffic Management



January 29, 2009

NextGen Mid-Term
Collaborative Air Traffic Management

Definition

Collaborative Air Traffic Management focus on the delivering services to accommodate flight operator preferences to the maximum extent possible.

Capabilities

Continuous Flight Day Evaluation [105302]

Traffic Management Initiatives with Flight Specific Trajectories [105208]

Improved Management of Airspace for Special Use [108212]

Trajectory Flight Data Management [101202]

Provide Full Flight Plan Constraint Evaluation with Feedback [101102]

On-Demand NAS Information – Provide Real Time Access to NAS Status [103305]

Full Collaborative Decision Making [105207]

Manage Airspace to Flow [108207]

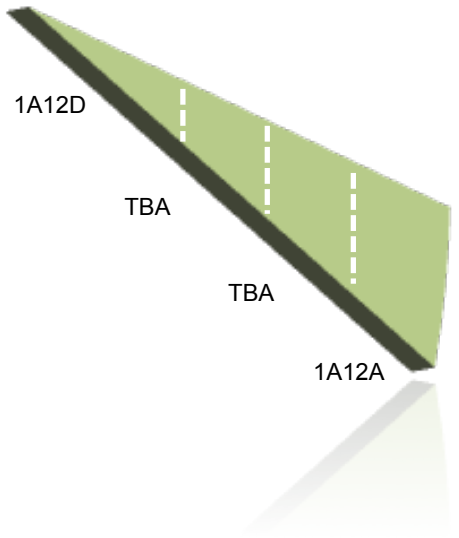
Operational Objectives

- Accommodate User Preferences
- Predictable Services for the User
- Community
- Greater Management of NAS resources - Moving Resources to Accommodate

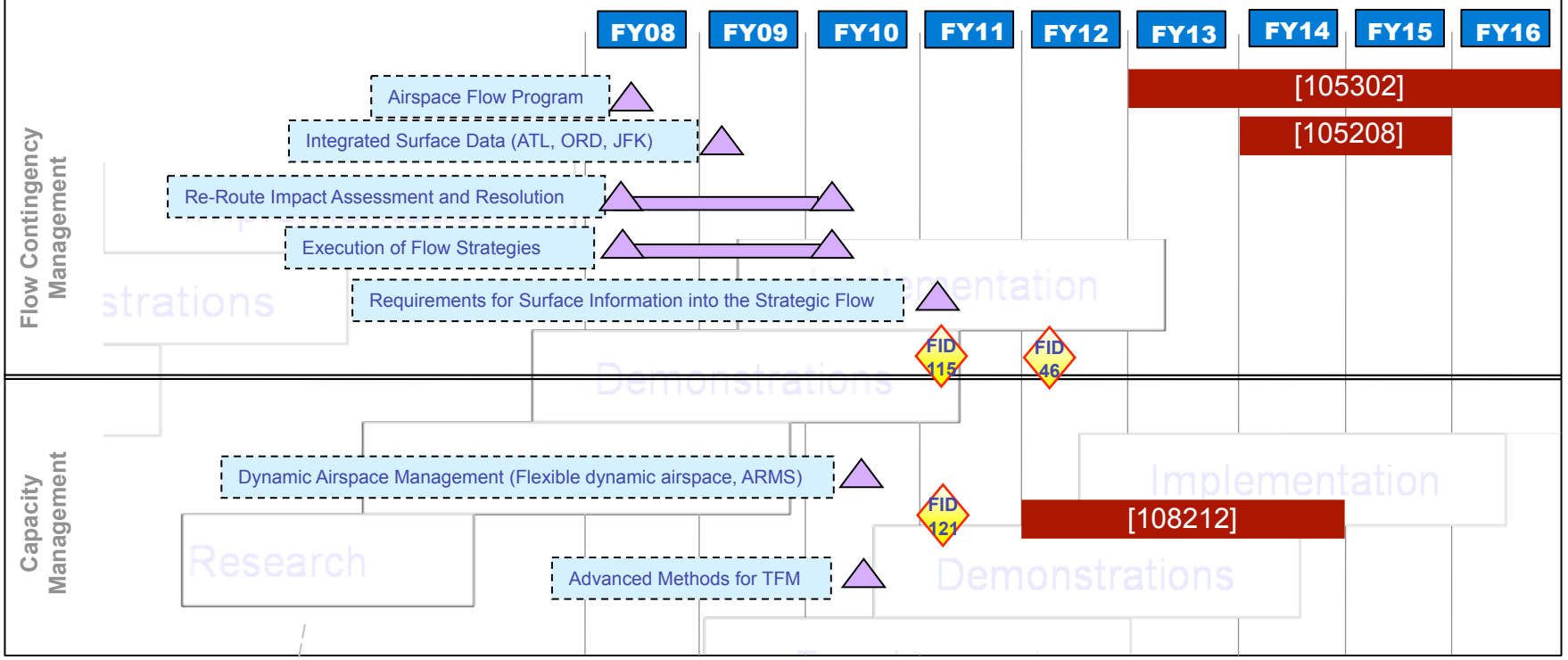
FY09 Activities

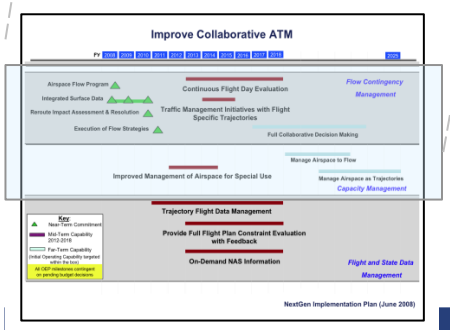
1A12D	Flow Control Management
1A12A	Common Status and Structure Data
TBA	Strategic Flow Management Enhancement
TBA	Flow Control Management – Strategic Flow Management Departures

Funding



Improve CATM Mid Term Automation Roadmap to Improvements





Date: January 29, 2009

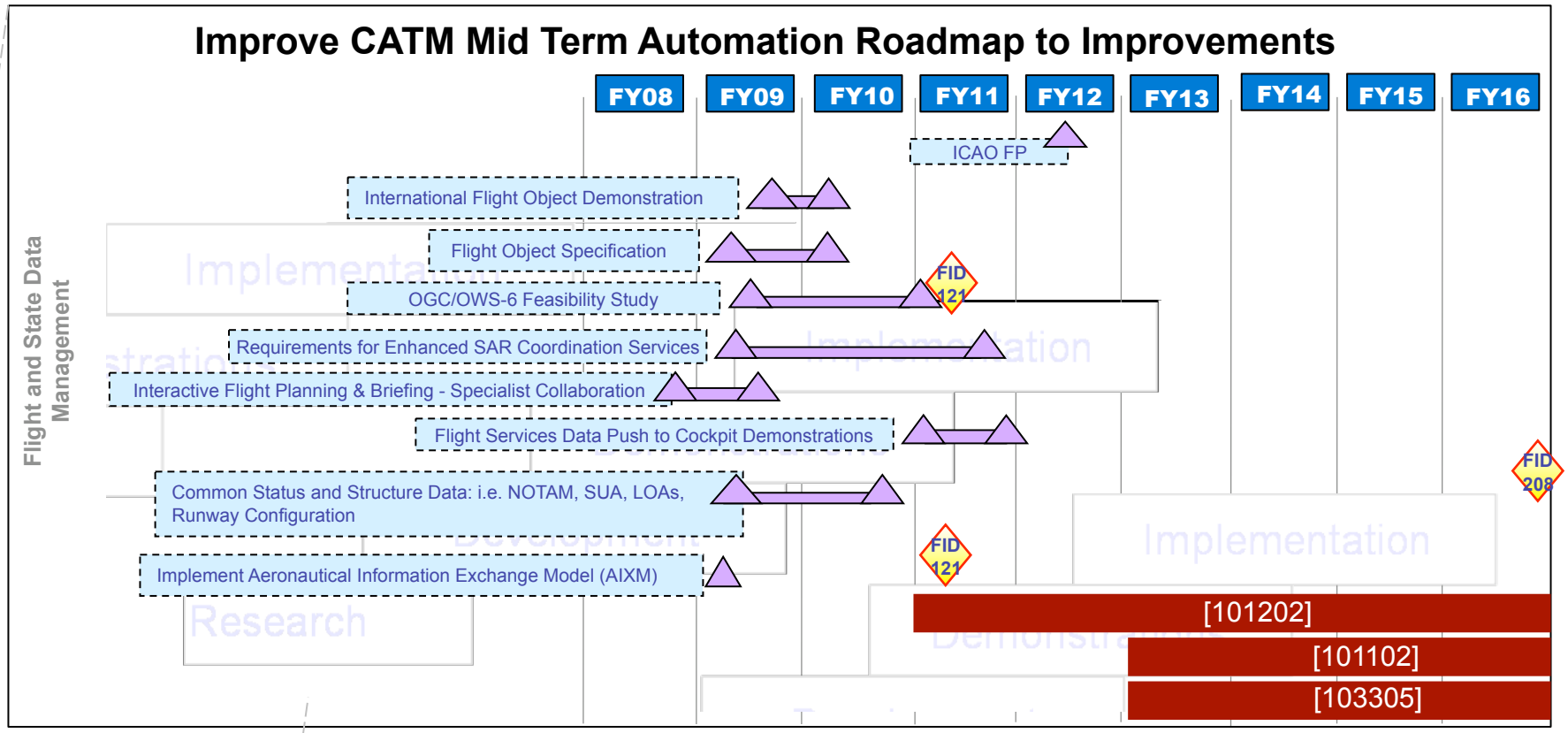
Capability Description

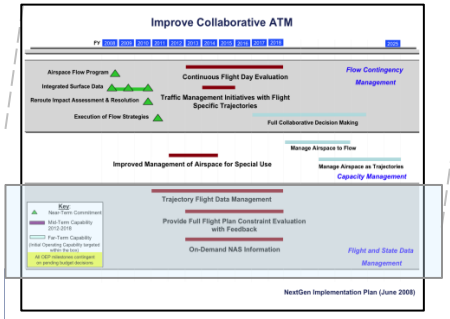
105302 - Continuous Flight Day Evaluation – Performance analysis where throughput is constrained will be the basis for strategic operations planning. Continuous (real-time) constraints will be provided to ANSP traffic management decision support tools and National Airspace System (NAS) users. Evaluation of NAS performance will be both a real-time activity feedback tool and a post-event analysis process. Flight day evaluation metrics will be complementary and consistent with collateral sets of metrics for airspace, airport, and flight operations.

105208 – Traffic Management Initiatives with Flight Specific Trajectories – Individual flight specific trajectory changes resulting from Traffic Management Initiatives (TMIs) will be disseminated to the appropriate ANSPs air traffic control (ATC) automation for tactical approval and execution. This capability will increase the agility of the NAS to adjust and respond to dynamically changing conditions such as bad weather, congestion, and system outages.

108212 – Improved Management of Airspace for Special Use – Airspace for special use assignments, schedules, coordination, and status changes will be conducted automation-to-automation. Changes to status of airspace for special use will be readily available for operators and ANSPs. Status changes will be transmitted to the flight deck via voice or data communications. Flight trajectory planning will be managed dynamically, based on real-time use of airspace.

Improve CATM Mid Term Automation Roadmap to Improvements





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Capability Description

101202 - Trajectory Flight Data Management– Trajectory Flight Data Management will improve the operational efficiency by increasing the use of available capacity. Advanced flight data coordination between facilities will maintain access to airports by facilitating reroutes, and supporting more flexible use of controller/capacity assets. By managing data based on volumes of interest, airspace/routings can be redefined to accommodate change. Trajectory Flight Data Management will also maintain continuous monitoring of the status of all flights, quickly alerting the system to unexpected termination of a flight and rapid identification of last known position.

101102 – Provide Full Flight Plan Constraint Evaluation with Feedback – Timely and accurate NAS information will enable users to plan and fly routings that meet their objectives. Constraint information that will impact proposed flight routes will be incorporated into ANSP automation, and available to users for their pre-departure flight planning. Examples of constraint information include special use airspace status, Significant Meteorological Information (SIGMET), infrastructure outages, and significant congestion events.

103305 – On-Demand NAS Information – NAS and aeronautical information will be available to users on demand. NAS and aeronautical information will be consistent across applications and locations, and available to authorized subscribers and equipped aircraft. Proprietary and security sensitive information will not be shared with unauthorized agencies/individuals.

NextGen Mid-Term
Relevant EA Decisions

Collaborative Air Traffic Management		
Decision Point (DP#)	Decision Point Description	Target Dates
46	Approve Tower Flight Data Management Segment 2, FID	2012
115	Approve Tower Flight Data Management Segment 2, FID	2011
121	AIM Modernization Segment 2, FID	2011
208	Flight Services Evolution Integrated Services and Capabilities, FID	2016

NextGen Mid-Term
Collaborative Air Traffic Management

BLI -1A12D

Flow Control Management –
Strategic flow Management Integration
Integration Execution of Flow Strategies into Controller Tools

FY09 Milestones	Q1	Q2	Q3	Q4
Integrate Key Long-Term Research Findings on Incremental Continuous Evaluations into a NextGen Era Concept of Operations for Matching Resource Allocations to Flows and Trajectories.				
Address the Role of Incremental, Probabilistic Capacity Management in Minimizing the Need for Traffic Management				
Conduct Gap Analysis of the Continuous Evaluation and Constraint Feedback Tools.				

NextGen Mid-Term
Collaborative Air Traffic Management

TBA

Flow Control Management – Strategic flow Management Integration Enhancing the Strategic Flow Program

FY09 Milestones	Q1	Q2	Q3	Q4
Next Gen Traffic Flow Management ConOps				
TFM Concept Engineering Gap Analysis Report				

NextGen Mid-Term
Collaborative Air Traffic Management

TBA

Flow Control Management –
Strategic flow Management Integration
Departure Trajectory Flow Management

FY09 Milestones	Q1	Q2	Q3	Q4
Information Analysis for Departure Feedback –Initial Findings				
Information Analysis for Departure Feedback –FinalDocument				

NextGen Mid-Term
Collaborative Air Traffic Management

BLI -1A12A

Flight and State Data Management – Common Status and Structure Data

FY09 Milestones	Q1	Q2	Q3	Q4
Program Plan for Common Status and Structure Data Scope		■		
High Level Common Status and Structure Data ConOps and Enterprise Architecture		■		
High Level Common Status and Structure Data Requirements and Constraints Document		■		
List of Scenarios		■		
Detailed ConOps and Joint Requirements for Leading Scenarios				■
Existing Data Model and Recommendations Report			■	
Data/Exchange Model and Requirements Recommendations for Proposed Information Exchange for Scenario Data				■
Acquisition Strategy and Contract for a Prototype for Scenario Digital Data Capture Tools			■	
SWIM – Compliant Common Operating Picture Architecture				■
Acquisition Strategy and Contract for Common Status and Structure Data Infrastructure				■